

CLAIMS:

1. Photo detector for converting at least one light signal arriving via at least one side of said photo detector and comprising at least one substrate layer and at least one epitaxial layer and at least one surface layer, wherein said side comprises said substrate layer, with said surface layer having a mirror function for reflecting at least parts of said light
5 signal.

2. Photo detector according to claim 1, wherein said surface layer comprises metal areas coupled to solders bumps for mounting said photo detector on a flexible printed-circuit board of an optical pick-up unit.
10

3. Photo detector according to claim 2, wherein said substrate layer is p-type or n-type respectively, said epitaxial layer is n-type or p-type respectively, with said epitaxial layer comprising at least one p-type or n-type area respectively, whereby said epitaxial layer and said area form electrodes of a diode.
15

4. Photo detector according to claim 3, wherein said epitaxial layer and said substrate layer form electrodes of a further diode.

5. Photo detector according to claim 2, wherein said substrate layer comprises
20 silicon-on-insulator.

6. Photo detector according to claim 2, wherein said substrate layer comprises an etch stopper.

7. Optical pick-up unit comprising a flexible printed-circuit board and a photo
25 detector mounted on this flexible printed-circuit board, which photo detector converts at least one light signal arriving via at least one side of said photo detector and comprises at least one substrate layer and at least one epitaxial layer and at least one surface layer, wherein said side comprises said substrate layer, with said surface layer having a mirror function for reflecting

at least parts of said light signal and comprising metal areas coupled to solders bumps for mounting said photo detector on said flexible printed-circuit board.

8. Method for producing a photo detector for converting at least one light signal arriving via at least one side of said photo detector, which method comprises the steps of locating at least one epitaxial layer on at least one substrate layer and of locating at least one surface layer on said epitaxial layer, wherein said side comprises said substrate layer, with said method comprising the step of giving said surface layer a mirror function for reflecting at least parts of said light signal.

9. Method according to claim 8, wherein said method comprises the step of thinning said substrate layer.

10. Method according to claim 9, wherein said step of thinning either comprises a substep of etching until an etch stopper, with said substrate layer comprising said etch stopper, or comprises a substep of removing silicon, with said substrate layer comprising silicon-on-insulator.